

**ABSTRACT**

A packet processing system architecture and method are provided. According to a first aspect of the invention, packet parser functions are distributed throughout a packet processing system comprising a packet classification system and a packet modification system. According to a second aspect of the invention, an egress mirroring function is provided to the system. According to a third aspect of the invention, a multi-dimensional quality of service indicator for a packet is provided. According to a fourth aspect of the invention, a cascaded combination of multiple, replicated packet processing systems is used to process a packet. A fifth aspect of the invention involves any combination of one or more of the foregoing.